FOURTH CYCLE MSIP

A GUIDE FOR DEVELOPING GIFTED CURRICULUM DOCUMENTS

Gifted Association of Missouri

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FOURTH CYCLE MSIP:

A GUIDE FOR DEVELOPING GIFTED CURRICULUM DOCUMENTS

PREFACE

In June 2002, a committee of gifted program teachers and administrators from across the state met in Columbia, Missouri. The purpose of the meeting was to discuss requirements for gifted programs during Cycle IV of the Missouri School Improvement Program (MSIP).

One of the new requirements involves having written curriculum documents for gifted programs that are supported by state funds. The need for such documents was not in question. Since most gifted curriculum is developed by individual teachers working on their own in a building or set of schools, the nature and quality of gifted offerings has tended to vary widely. Some teachers have built and refined their curriculum over the course of a long career in gifted education. Other teachers have focused on gathering resources rather than documenting curriculum, have not allocated time to organize their curriculum into an established format, or are brand new to the field and have had other priorities. With increasing budget concerns and growing demands for accountability, a more consistent caliber of curricular documentation needs to be achieved in the state. In many cases, continued support for gifted programs will hinge on our ability to document what we teach gifted students and in justifying how our efforts impact this unique group of learners.

The committee that met in June knew there were important questions to answer: What should a gifted curriculum document look like? What should it include? What kind of support would gifted teachers and district administrators need in order to meet this new requirement? These questions, among others, led to a series of follow-up meetings and the writing of this guide.

It is our hope that district work on gifted curriculum documents will serve as a catalyst for meaningful discussions with colleagues about what constitutes quality curriculum and how instruction is best delivered to gifted students. Discussions of this nature invariably lead to changes and enhancements of existing curriculum and developing ideas for new and better ways of challenging gifted students.

As you undertake this important work, please consider sending comments and suggestions to us. In the coming years, we anticipate updating this guide based on feedback that we receive and new information that is published by the Department of Elementary and Secondary Education.

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INTRODUCTION

There are many ways to prepare curriculum for gifted students. The number of books and articles on this subject is both substantial and impressive. Having a wealth of curriculum resources strikes most practitioners as a double-edged sword. On the one hand, having choice allows professionals to find an author or approach that best meets their needs and instructional philosophy. On the other hand, finding and screening available resources is a difficult, time-consuming process. That is particularly true for teachers who work alone in a district and are asked to identify and implement an approach without input or support from other gifted teachers.

This Gifted Curriculum Guide is intended as a user-friendly resource for school personnel in both large and small districts in Missouri. The Guide has two complementary purposes: (1) to provide a structure that can be used to develop or refine curriculum that is targeted for gifted students and (2) to provide a "roadmap" for meeting the Missouri School Improvement Program's (MSIP) curriculum requirements associated with Cycle IV. Those requirements include having written curriculum for students in gifted programs.

The guide's recommendations are based on a very simple premise -- that documentation of curriculum in gifted programs should be as consistent as possible with that of other content areas, be it communication arts, mathematics or science. While there are notable differences between these subjects and the field of gifted education, there are advantages to linking gifted curriculum with that of other disciplines taught to students. For some, having similar categories of information in curriculum documents will add credibility to the content of the gifted program's offerings. A similar format also suggests a partnership with the regular school program and demonstrates a commitment to work toward achieving similar goals. In this age of accountability, that message can be very powerful. The key is to remain true to gifted principles, beliefs and know-how while incorporating common elements into our curriculum document. That task, while a challenge, is not as complicated as it might initially appear to be.

How do we anticipate this guide being used? Just as you consider the unique features of individual learners as classroom instruction is planned, so must you consider the individual circumstances of your district as you prepare for Cycle IV review. Some programs already have gifted curriculum documents that would meet MSIP standards. If that is the case, this guide could be used as a check against current practice and an opportunity to consider some new ideas for implementation. Other programs have further to go in establishing a consistent and defensible approach to preparing curriculum material. If that is the situation, you may decide to closely follow the suggestions that are offered. In either case, we want this guide to be viewed as a set of recommendations rather than a prescription for district practice. It is up to you to identify your needs and implement the recommendations that will best serve your students and district.

CURRICULUM DOCUMENT FORMAT

Although there are variations that are acceptable, curriculum documents generally consist of four sections. There is an opening "recognition" section that identifies the content area and individuals responsible for preparing the material. The second section includes information on the content or specialty area as a whole. The third section contains information on specific courses or units of study within the area. The final section includes relevant information grouped as appendices.

Each of these sections has a number of related sub-sections. The key sub-sections are noted below:

Section I: Initial Information

1. Cover (Title Page)
2. Acknowledgements
3. Curriculum Committee Members
4. Table of Contents

Section II: Information on the Curriculum as a Whole

1. Rationale for Gifted Program Curriculum
2. Goals for Graduates
3. Content and Process Related to Equity, Technology, Research and Workplace Readiness
4. Curriculum Evaluation and Revision Process
5. Curriculum Alignment
6. Scope and Sequence

Section III: Information on Specific Courses or Units

1. Unit Rationale
2. Measurable Objectives
3. Correlated with Show-Me Standards
4. Correlated with District Goals and Objectives
5. Instructional Strategies
6. Assessments
7. Resources

Section IV: Appendices

1. Student Identification Procedures (Optional)
2. Program Design (Optional)
3. Other (Optional)

In the pages that follow, each of the above noted sections is defined and described in terms of application to gifted education. A sample response appropriate for meeting the expectations of Fourth Cycle MSIP is also provided.

COMPONENTS OF GIFTED CURRICULUM DOCUMENTS

SECTION I: Initial Information

The front part of an MSIP curriculum document includes information on the curriculum as a whole. This information includes four items: Cover Page, Acknowledgements, Curriculum Committee Members, and Table of Contents. A sample of each of these elements is provided below.

1. Cover (Title Page)

Sample Page

Gifted Program Curriculum Guide Grades K-12

DISTRICT LOGO

DISTRICT NAME
ADDRESS
TELEPHONE NUMBER

BOARD ADOPTED: DATE

2. Acknowledgements

Sample Page

Board of Education Members
20XX-20XX

NAME
NAME
NAME
NAME
NAME
NAME
NAME

District Leadership

Superintendent
Assistant Superintendent for Curriculum & Instruction
Others

3. Curriculum Committee Members

Sample Page

Members of Gifted Curriculum Committee
20XX-20XX

Elementary
NAME
NAME
NAME

Middle School
NAME
NAME
NAME

High School
NAME
NAME

4. Table of Contents

Sample Page

Table of Contents

Page

SECTION II: Information on the Curriculum as a Whole

The second part of an MSIP curriculum document includes information on the curriculum as a whole. This information includes the following six items:

1. Rationale for Gifted Program Curriculum
2. Goals for Graduates
3. Content and Process Related to Equity, Technology, Research and Workplace Readiness
4. Curriculum Evaluation and Revision Process
5. Curriculum Alignment
6. Scope and Sequence

On the pages that follow, an example of each of these elements is provided. Our intent is for these entries to illustrate what a particular document page might look like and what type of response might be provided. A single example cannot do justice to the range of responses that are possible and appropriate. We expect that you will need to modify these responses to reflect the individual nature of your district and the unique features of your gifted program curriculum.

1. Rationale for Gifted Program Curriculum

This section should provide an explanation or justification for having gifted program curriculum. The best way to do that is to briefly explain why gifted programs are needed, the goals of the gifted program, why the curriculum is uniquely suited for gifted learners, and how the curriculum relates to the district's overall mission and philosophy.

Sample Response

Recognition of the special needs of gifted students has a longstanding tradition in Missouri. Over a quarter of a century ago, the General Assembly passed legislation that recognized the needs of gifted students and authorized financial support for gifted programs. The legislation stated, "School districts are expected to provide programs of instruction suitable for the full range of student ability, from handicapped and disadvantaged learners through those who are academically advanced."

More recent acknowledgement of the importance of addressing gifted students' learning needs is found in the Standards of the Missouri School Improvement Program, which states, "Each district identifies gifted and talented students at all levels and provides them differentiated instruction suitable for their levels of intellectual, physical, and social maturity."

Our district's philosophy focuses on helping every child learn and develop his or her individual potential. For students who come to school with advanced knowledge and unusual learning capacity, that potential can be compromised without offering curriculum that is differentiated and matched to students' learning characteristics. Those characteristics include the capacity to handle content at an advanced level and pace, the ability to explore areas in significant depth, the tendency to ask and grapple with difficult questions, and the desire to use leadership abilities to make a difference in the world-at-large.

Curriculum for gifted students is specifically designed to challenge academically advanced learners and provide experiences that require critical thinking, problem-solving, independent study skills, communication, and persistence in the face of challenges. When engaged in high quality gifted services, students will develop their unique abilities, maintain their passion for learning, and have the opportunity to contribute to the strength and vitality of our schools, district and community.

2. Goals for Graduates

A gifted program's goals statement should indicate how its curriculum supports the school district's goals for graduates. It should focus on having graduates master content and skills at a level commensurate with their learning potential. Specific goals of the gifted program can also be included.

Sample Response

As a result of offering differentiated curriculum and personalized support, gifted students will have the opportunity to achieve district goals at the level commensurate with their talent. They will also be challenged to apply their knowledge and skills in complex and advanced ways so that they can continue to develop academically. If provided with the challenge and support that is needed, these students will become highly productive citizens who contribute in significant ways to the well being of the broader community.

Goals to address in performance areas include:

Students will:

1. acquire the knowledge and skills to gather, analyze and apply information and ideas.
2. acquire the knowledge and skills to communicate effectively within and beyond the classroom.
3. acquire the knowledge and skills to recognize and solve problems.
4. acquire the knowledge and skills to make decisions and act as responsible members of society.

Goals to address in the content areas:

Students will:

1. acquire a solid foundation in the disciplines of communication arts, mathematics, science, and social studies

2. operate at advanced levels within these disciplines

3. apply knowledge of disciplines to produce work that reflects individuality and creativity and is advanced in relation to other students of similar age and experience.

3. Content and Processes Related to Equity, Technology, Research, and Workplace Readiness Skills

Districts are expected to provide direct instruction on equity, technology, research, and workplace readiness skills at least three times during students' K-12 learning experience. While these topics may be covered in any of the district's curriculum guides, gifted curriculum generally touches on all of them at one time or another. In this section, you should provide examples of how these topics are integrated into the classes or units you teach.

Sample Response

Throughout the gifted curriculum, teachers integrate appropriate content and processes related to gender equity, racial/ethnic equity, application of technology, research strategies, and workplace readiness skills to ensure that graduates of the school district successfully demonstrate understanding and application of the Show-Me Standards.

Examples of integration of those content and processes are listed below.

Equity: In a unit on inventors and inventions, lessons include a focus on female and minority inventors and the challenges they encountered in being recognized for their contributions.

Research: Students conduct research on chosen topics, demonstrating knowledge of primary and secondary sources, and applying the information they find to an individual or group project. For example, for a National History Day unit, students use primary and secondary sources to research and develop an original project on a topic of interest. These projects meet the guidelines of the National History Day competition and enables students to enter regional, state, and national contests.

Technology: In a unit on architecture, students would use Computer-Assisted Design software to develop plans for a structure that meets defined needs and falls within established parameters (such as square footage and budget).

Workplace Readiness: In a unit on robotics, students investigate the career preparation required of engineers and visit a facility that incorporates robotic technology. In a unit on city planning, students investigate local zoning requirements and then work as a team of "professionals" to design model towns that provide for community needs and also meet local zoning restrictions.

4. Curriculum Evaluation and Revision Process

Curriculum evaluation and revision is an on-going process. In this section of the document, you should indicate how your district evaluates the strengths and weaknesses of your program's curriculum and how successful you are in reaching program goals. Multiple sources of information should be referred to, as should your cycle for reporting results to the Board of Education.

Sample Response

Evaluation of the gifted program and its curriculum is an on-going process. An evaluation committee collects and reviews information to determine program strengths and areas for improvement. Surveys are used to obtain feedback from parents, students, and staff regarding the program's effectiveness. In addition, district data on student achievement is analyzed, student and staff accomplishments are noted, and developments in gifted and general education are reviewed to help determine recommendations for gifted program enhancements.

Each year, on or before June 30th, feedback about the gifted program curriculum is solicited, summarized in a written report, and filed for future reference. Every two years, a formal report is presented to the Board of Education. Copies of program evaluation reports are maintained in the district for review during MSIP team visits.

5. Curriculum Alignment

There are two types of curriculum alignment – internal and external. Internal alignment involves connecting learner objectives, activities, and classroom assessments. External alignment involves connecting learner objectives, activities and assessments to Missouri's Show-Me Standards and to a district's curriculum objectives. National standards can also be referred to as part of external alignment procedures.

Sample Response

Curriculum offered to gifted students needs to be developmental, with skills introduced at the appropriate level for each student. At any grade level, the focus of gifted curriculum alignment is on skills that can be applied to all content areas and to success in later life. Examples of such process skills are information gathering and processing, critical and creative thinking, problem solving, reasoning, decision-making, and the ability to communicate effectively. These performance skills are consistent with the Show-Me Standards. Gifted students can be expected to learn and apply these skills at an earlier age and at a more advanced level than their grade-level peers.

6. Scope and Sequence

Scope and sequence refers to the articulation of content and process objectives across grade levels. In resource or center-based gifted programs, content is generally interest-driven and normally does not fit into a scope and sequence format. The key in such program models is to develop a scope and sequence of performance skills. Those performance skills can be applied to any advanced-level content area being studied and are easy to align with Show-Me Performance Standards. If your program's format is full-time gifted classes, curriculum is ordinarily accelerated and presented in greater depth and breadth than in regular classrooms of students. Regardless of your program's design, students should be immersed in content-rich experiences.

Sample Response

A scope and sequence of performance skills has been developed in the key areas targeted by the gifted program's curriculum. These areas are aligned with the Show-Me Performance Standards and can be applied to increasingly challenging work offered to gifted students. The areas include:

- Information Processing
- Critical Thinking
- Problem-Solving
- Communication
- Responsibility

(Note: At this point in your document, your program's scope and sequence should be included. Possible cognitive and affective processes, along with sample scope and sequence charts, are provided in Appendix 3 of this Guide. Each district should select the performance skills they believe are important to develop through their curriculum. There is no right or wrong list of skills to address, as long as the skills can be aligned with Show-Me Standards. Other process areas that districts often choose to address are:

- Affective Thinking
- Creative Thinking
- Logical Thinking
- Research Skills
- Leadership Development

Districts with full-time gifted programs generally enrich and accelerate subject matter content that has been defined in district curriculum documents. A scope and sequence for performance skills is still pertinent.)

SECTION III: Information on Course or Unit Content

The pages in this section of the Gifted Curriculum Document should be prepared on a Curriculum Template. There is no one "correct" template to use. The template developed for this Guide can be modified at a district's discretion (see Appendix 1 for examples of alternatives). However, there are elements that must be incorporated into any template design in order to meet minimum standards for curriculum documentation. Those elements include: Unit Rationale, Measurable Learner Objectives, Correlation of Show-Me Standards and District Goals and Objectives, Instructional Strategies, Assessment, and Resources. Examples of additional categories of information, which go beyond the minimum expectations, are included in the sample templates found in Appendix 1.

A description of the essential template components is provided below.

Unit Rationale	• Recognizes the nature and needs of gifted learners • Indicates importance of topic • Indicates the level of course content
Measurable Learner Objectives	• Identifies the outcomes of learning • Specifies the knowledge to be gained • Specifies the skill(s) to be demonstrated
Correlation of Show-Me Standards and District Goals and Objectives	• Links learning objectives to Show-Me Standards and grade-level expectations • Links learning objectives to district goals and objectives
Instructional Strategies	• Provides alternative approaches to address student abilities, interests and learning styles • Enables students to apply their learning to real-world issues and challenges • Promotes decision-making, higher-order thinking, and transfer of knowledge and skills • Supports objectives and assessments
Assessment(s)	• Focuses on student performance • Allows for student self-assessment • Can include pre and post assessments
Resources	• Indicates key materials to be accessed • Indicates technology to be used

GIFTED PROGRAM CURRICULUM TEMPLATE

Unit Title:	**Grade:** **Duration:**
Unit Rationale:	
Measurable Learner Objectives:	
Show-Me Standards:	
District Goals/Objectives:	
Instructional Strategies:	
Assessment(s):	
Resources:	

Note: In addition to the basic elements, district templates can have sections that relate to a specific curriculum development model (eg., NAGC's The Parallel Curriculum, William & Mary's Integrated Curriculum Model, Renzulli's Multiple Menu Model). Reference can also be made to connections with the visual and performance arts (eg., art, music, physical education), levels of Bloom's Taxonomy, etc.

GIFTED PROGRAM CURRICULUM TEMPLATE
(with recommendations)

Unit Title: **Grade:**

should include theme or unit title, targeted grade level(s), and approximate number of hours (or weeks) of instruction

Duration:

Unit Rationale:

should explain why it is important for students to study this topic

Measurable Learner Objectives:

should focus on higher level thinking and application of knowledge and skills

Show-Me Standards:

should include reference to both knowledge and performance skills

District Goals/Objectives:

should refer to the most relevant objectives in your district's curriculum documents; the objectives chosen should be from one to three years above the grade level (and grade-level expectations) in which students are enrolled

Instructional Strategies:

should include a variety of strategies that address different learner characteristics and needs (abilities, interests, styles)

should clearly lead students to achieving stated learner objectives

to the extent possible, should enable students to apply learning to real-world situations

Assessment(s):

should provide information about student achievement of stated learner objectives

should include a separate page that contains the assessment scoring guide for the unit's most important project or performance event

Resources:

should include reference to such items as books, magazine articles, relevant newspaper articles, websites, computer programs, community resources, equipment to be used, etc.

GIFTED PROGRAM CURRICULUM TEMPLATE
Elementary Sample

Unit Title: *Return to the Moon*

Grade: Second

Duration: 4 months

Unit Rationale:

The fascination people have with the Moon extends from the imaginative to the scientific, from fanciful to the factual, from dreaming of possibilities to actually planning a lunar base. The intrigue of going to the Moon has now been replaced with the recognition that further exploration and knowledge of space will result in improved living conditions on Earth. Lunar exploration could solve limited resource availability on Earth. Helium-3, an isotope of the element helium, can be the fuel for the fusion power plants that will provide Earth with all the electric power needed for the foreseeable future and enable us to colonize space.

According to a report of the National Commission on Space, "Many children and young people today expect and anticipate that they will live and work in space. We can be confident that they will be fully capable of taming that new frontier environment as were our ancestors who built America." Given this reality, our unit will examine and explore the possibility of future lunar exploration, the issues involved in establishing human habitats, and the initiatives students can undertake to support lunar exploration.

Measurable Learner Objectives:

By the end of this unit students will be able to:

- Apply, analyze and evaluate science concepts related to lunar exploration.
- Employ effective written, verbal and visual communication skills to convey ideas and information about lunar exploration.
- Apply appropriate problem solving strategies to solve problems related to establishing human habitats on the Moon.
- Acquire knowledge and skills to make decisions about supporting lunar exploration.
- Acquire the skills to become a responsible group member.

Show-Me Standards:

Knowledge:

Science 1, 2, 3, 4, 5, 6, 7, 8
Social Studies 2, 5, 7
Communication Arts 4, 5, 6

Performance:

1.1, 1.2, 1.4, 1.5, 1.8, 2.1, 2.2, 2.3, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 4.1, 4.4, 4.5, 4.6

District Goals/Objectives:

- Science, Grade 5, CCO I, CCO III
- Language Arts, Grade 5, CCO I, CCO II, CCO III, CCO IV, CCO V, CCO VII, CCO VIII
- Social Studies, Grade 4, IV
- Math, Grade 4, CCO III

Instructional Strategies:

Working as a group students will:

- Complete "Disaster on the Moon" activity based on current knowledge and again at the completion of the unit.
- Brainstorm and discuss basic human survival needs.
- View video on Newton's three laws of motion
- Play Newton's Three Laws of Motion Jeopardy and Lunar Colony Jeopardy.
- Cover specifics of multi-stage rocketry.

Working in small groups students will:

- Use the scientific method to complete stations about lunar phases and physical characteristics of the Moon.
- Complete stations reinforcing laws of motion and rocketry concepts
- Work as a team to organize a company (including company name, motto and logo), research and build a lunar colony component.
- Educate others about lunar colonization by writing articles and advertisements for a Moon Magazine.
- Develop and analyze the results of a survey related to the public's knowledge of lunar exploration.

Individually students will:

- Research Moon characteristic topics and prepare individual pages for "Big Book" to share with classmates and parents.
- Write and illustrate "A Moving Story" based on one of Newton's three laws of motion.
- Build a model rocket.

Assessment(s):

- Observation: Newton's laws of motion and scientific method
- Academic Prompt: Big Book about the Moon
- Performance Task: Writing articles and advertisements for a Moon Magazine
- Performance Event: Model, Microsoft PowerPoint presentation, skit, puppet show, video, poster/drawing, etc., created within topic groups on specific component of lunar colony and presented to classes and videotaped to share with others

Resources:

Books: *Living on the Moon* by David Baker, Rourke (1989), *Lunar Bases* by Sharon Cosner, Watts (1990), *Moon Facts* by R. Lynn Bondurant, Jr., *The First Travel Guide to the Moon* by Rhoda Blumberg, Four Winds (1980), *Home on the Moon* by Marianne J. Dyson
Websites: www.asi.org, www.lunacorp.com, www.lunar-reclamation.org, www.moonsociety.com, www.nss.org, www.space-frontier.org/projects/moon
Videos: 3-2-1 Contact Episode #2, Exploring Gravity, Exploring the Laws of Motion, The Eagle has Landed
Software: Return to the Moon (Moon flight simulator and lunar encyclopedia)
Guest speakers: NASA, Washington University, Boeing, University of Missouri - Rolla

Unit developed by Chris Nobbe

Return to the Moon

Scoring Guide for Oral Presentation
Second Grade

Name_____Date_____

Topic _____

Criteria

Plan, Create, and Present a Message: The group planned an organized, informative, and creative presentation. The students successfully communicated information with the class.

Emerging	Learning	Accomplishing	Excelling
❑ Presentation included one or two of the three main parts. ❑ Visuals need to be completed or visuals distracted from oral presentation. ❑ Shared little information. ❑ Teacher reminders to speak loudly and clearly.	❑ Presentation included introduction, body, and conclusion. Information was randomly presented in the body. ❑ Visuals were complete, could be seen by the audience, and was a good fit. ❑ Shared some information. ❑ Presenters used adequate volume and clarity.	❑ Presentation included introduction, body, and conclusion. Information was shared in an organized way. ❑ Visuals were detailed, could be easily seen by the audience, and enhanced the presentation. ❑ Overall style of presentation was creative. ❑ Shared much information. ❑ Presenters spoke loudly and clearly and made eye contact with the audience.	❑ Presentation included introduction, body, and conclusion. Complex information was shared in an organized way. Presentation style was creative. ❑ Visuals were complex, detailed, creative, and could be easily seen by audience. Visuals enhanced the presentation. ❑ Overall style was creative and complex. ❑ Shared a great deal of complex information. ❑ Presenters spoke loudly and clearly and made eye contact with the audience. Presenters projected confidence throughout the presentation.

GIFTED PROGRAM CURRICULUM TEMPLATE
Elementary Sample

Unit Title: **Grade:** Fourth

St. Louis Architecture

Duration: 45 Hours

Unit Rationale:

A study of architecture gives students the opportunity to increase their awareness of the structures in the world surrounding them. This study uses the built environment as a window to examine the world and the ideas, laws, and principles that govern it. These laws and principles include the influence of architecture of the past, the physics and forces of structures, factors effecting human need for shelter, "form follows function," as well as techniques of architectural drafting, design and preservation.

Specific skills and content information will be taught. Students will investigate the architectural systems of the Greek, Byzantine, Roman, Chinese and Gothic periods and study the elements required for planning, designing, and building a structure. They will focus on the process of learning through visual thinking, problem solving, creative thought, group interaction, technology and communication, all skills necessary to be successful in the 21st Century.

Most importantly, students will learn that architecture is a system of interrelated elements working together to produce an end product. Upon completion of this unit, students will not only look at their own city and the significance of the historical buildings that are in danger of demolition, but also take measures to preserve and protect these buildings.

Measurable Learner Objectives:

By the end of this unit students will be able to:

- Gather and analyze information and ideas related to past and present architecture.
- Communicate effectively in writing, verbally and visually to convey information pertaining to historical St. Louis landmarks.
- Recognize and solve problems incurred in designing a home.
- Demonstrate critical thinking in devising an action plan to preserve an endangered building.
- Demonstrate responsibility while working as a group member.

Show-Me Standards:

Knowledge:

Social Studies 4, 5
Science 4, 8
Fine Arts 1
Math 1, 2
Communication Arts 6

Performance:

1.1, 1.4, 1.7, 1.8, 1.10, 2.1, 2.2, 2.3, 2.7, 3.1, 3.2, 3.4, 3.6, 4.1, 4.5, 4.6

District Goals/Objectives:

- Science, Grade 7, CCO I, CCO V
- Math, Grade 7, CCO II, CCO V
- Social Studies, Grade 7, CCO II, CCO IV
- Technology, Grade 8, CCO V, CCO IX
- Language Arts, Grade 9, CCO V

Instructional Strategies:

Working as a group students will:

- Use books, periodicals, CDs, laser discs, computer software and telephones to research and evaluate past architectural styles.
- Analyze sample blueprints to learn architectural symbols, use of scale and importance of architectural drafting as an essential part in designing a building.
- Visit and explore local St. Louis landmarks.

In small groups students will:

- Assess the human need for shelter, its ever-changing role through time, the element of "form follows function" and create computer generated blueprints reflecting their analysis of a living scenario.
- Develop an action plan for restoring and preserving St. Louis architecture.

Individually students will:

- Create a comprehensive synopsis and accompanying booklet to present to the St. Louis Historical Society Museum.
- Master the technique of hand-building using the slab method to build a clay façade of their building, complete with scale measurement for accuracy.
- Give a written/visual presentation to their peers on the building they selected to restore/preserve.

Assessment(s):

- Performance Task: Using oral and technology skills, prepare presentation on historical architectural systems
- Performance Task: Analyze specific needs and develop blueprints of a building that demonstrates "form follows function"
- Performance Event: Develop a way to restore or preserve a historically significant structure in St. Louis

Resources:

Books: *A Guide to Architecture of St. Louis* by: George McCue and Frank Peters (1989)
St. Louis: Landmarks & Historic Districts by: Carolyn Hewes Toft w/Lynn Josse (2002)
Architecture of the Private Streets of St. Louis by: Charles C. Savage (1987)
Websites: http://stlouis.missouri.org/501c/landmarks/index.html, http://www.builtstlouis.net, http://stlouis.missouri.org/government/heritage
Mentors: Landmarks Association of St. Louis, various community architects
Software: 3-D Home Architect
Videos: Articulate Space and Rome & Pompeii
Field trip: St. Louis landmarks

Unit developed by Tammy Turner

Architecture Final Project Student Criteria Sheet

Name_____ Date_____

	Learning	Accomplishing	Excelling	Exceptional
Applying knowledge of style	I labeled two-three parts of the building.	I labeled three-five parts of the building and included at least one element and/or principle, one style, and one material.	I labeled five-seven parts of the building and I included elements, principles, styles, and materials.	I labeled seven or more parts of the building and I described how the various elements, principles, styles, and materials were used.
History and Architects	I answered most questions with a minimal response.	I answered all questions with one complete sentence and one example.	I answered all questions with detailed, complete sentences and at least two-three examples.	I answered all questions with detailed, complete sentences and at least three or more examples.
Researching the Era	I answered most questions with a minimal response.	I answered all questions with one complete sentence and one example.	I answered all questions with detailed, complete sentences and at least two-three examples.	I answered all questions with detailed, complete sentences and at least three or more examples.
If you Build it They Will Come	I included a topic sentence, two-three concrete details, two-three pieces of commentary, and a brief closing sentence.	I included a topic sentence, only three concrete details, and a commentary for each one, and a closing sentence.	I included a thoughtful topic sentence, three complete main concrete detail sentences, three sub concrete details, three commentary sentences, and a detailed closing sentence.	I included a thoughtful topic sentence, at least three complete main concrete detail sentences, at least three sub concrete details, at least three commentary sentences, and a detailed closing sentence.
Past, Present, and Future Uses	I included a topic sentence, two-three concrete details, two-three pieces of commentary, and a brief closing sentence.	I included a topic sentence, only three concrete details, a commentary for each one, and a closing sentence.	I included a thoughtful topic sentence, three complete main concrete detail sentences, three sub concrete details, three commentary sentences, and a detailed closing sentence.	I included a thoughtful topic sentence, at least three complete main concrete detail sentences, at least three sub concrete details, at least three commentary sentences, and a detailed closing sentence .

Action Plan For Preserving an Endangered Building	I included a topic sentence, two-three concrete details, two-three pieces of commentary, and a brief closing sentence. I developed an action plan based on other people's ideas.	I included a topic sentence, only three concrete details, and a commentary for each one, and a closing sentence. I developed an action plan using some of my own, original ideas.	I included a thoughtful topic sentence, three complete main concrete detail sentences, three sub concrete details, three commentary sentences, and a detailed closing sentence. I developed an action plan based on my own original, thoughtful ideas and followed through with my plan.	I included a thoughtful topic sentence, at least three complete main concrete detail sentences, at least three sub concrete details, at least three commentary sentences, and a detailed closing sentence. I developed an action plan based on my own original, thoughtful ideas and followed through with my plan inside and outside of school.
References and Notes Page	I included at least one website reference and one book reference.	I included at least two website references and two book references.	I included at least two-three website references and two-three book references and presented them in the correct format.	I included at least two-three website references and two-three book references, and outside references that I discovered on my own and presented them in the correct format.

Describe how your group worked as a team.

What percentage of the Final Project Booklet did you complete?

GIFTED PROGRAM CURRICULUM TEMPLATE
Middle School Sample

Unit Title: **Grade:** Sixth

Cops and Robbers: The Future of Forensics

Duration: 3 months

Unit Rationale:

In this unit students will explore how changes and advances in technology and science have positively impacted the ability of law enforcement agencies to solve crimes. It will, through hands-on experience, provide exposure to science-based careers and promote career awareness in the fields of forensic science, law enforcement, and criminal justice.

Measurable Learner Objectives:

By the end of this unit students will be able to:

- Study and apply the scientific method as it relates to criminal investigation.
- Recognize the role science plays in a criminal investigation.
- Apply critical thinking skills while formulating conclusions and collecting evidence to support their conclusions.
- Distinguish between relevant and irrelevant information.
- Draw conclusions based on observations and facts.
- Develop questioning and communication skills.
- Become aware of careers associated with forensic science, law enforcement and criminal justice.

Show-Me Standards:

Knowledge:

Science 3, 7, 8
Math 1, 2, 3
Social Studies 3, 4, 6, 7
Communication Arts 1, 3, 4, 5, 6

Performance:

1.1, 1.2, 1.3, 1.4, 1.6, 1.7, 1.8, 1.10, 2.1, 2.3, 3.5, 3.6, 4.1, 4.6

District Goals/Objectives:

- Language Arts, Grade 8, CCO II, CCO III, CCO Va, CCO Vb, CCO VI
- Math, Grade 8, CCO IIa, CCO IIb, CCO IIIa, CCO IIIb
- Challenge Science, Grade 8, CCO I, CCO IV

Instructional Strategies:

Working as a group students will:

- Be introduced to and discuss topics pertaining to basic criminal investigation procedures
- View a PowerPoint presentation to learn about the variety of careers involving different branches of science within the field of forensic science

Individually students will:

- Research a type of evidence and prepare a PowerPoint presentation or conduct an experiment to explain it to their classmates
- View a simulated crime scene and record the pieces of possible evidence found at the scene
- Sketch the crime scene and discuss the difference between circumstantial and direct evidence
- Practice interviewing/questioning skills and techniques by interviewing potential crime suspects and witnesses
- Gather and interpret evidence to establish probable cause for potential suspects in order to view physical evidence at a forensic lab
- Analyze reports obtained from various forensic labs
- Use observation skills by using a composite drawing computer program
- Analyze and draw conclusions from evidence collected
- Write a detective report interpreting the evidence and naming a suspect

Assessment(s):

- Performance Task: PowerPoint presentation or experiment that explains evidence
- Performance Task: Gather and interpret witness statements and physical evidence
- Performance Event: File a detective report with analysis of evidence collected

Resources:

Books: *Crime Scene Detective* by Karen Schulz, *Classifying Fingerprints* by Nancy Cook, *Detective Science* by Jim Wiese, *Forensic Detection* by Lional Bender, *Scientific Crime Investigations: Real Life Science Labs* by Pam Walker & Elaine Wood
Websites: www.CourtTV.com
Guest speakers: St. Louis County detectives
Forensic science kits: Carolina Biological Supply Company (www.carolina.com)
Field trip: Courthouse

Unit developed by Karen Schulz

Evidence Lesson Grading Sheet

TOPIC _____

NAMES _____

CRITERION	MASTERING (10-9 PTS)	ACCOMPLISHING (8-6 PTS)	LEARNING (5-0 PTS)
DEMONSTRATES KNOWLEDGE OF TOPIC _____x 4 = _____	*included 30 or more relevant facts *in-depth and detailed in explanation *main ideas clearly stated so that audience has a clear understanding of the material	*included between 20 and 30 facts most of which were relevant *somewhat in-depth and detailed in explanation *main ideas stated so that audience has a limited understanding of the material	*included less than 20 facts some of which were relevant *lacking depth and detail in explanation *main ideas stated in a confusing, unfocused way so audience does not understand material
ORGANIZATION OF PRESENTATION _____ x 2 = _____	*includes a thorough, thoughtfully planned introduction, body and conclusion. *moves smoothly from one topic to another *powerpoint effective: great use of graphics, sounds effects, color, font, etc. *professional and prepared	*includes a planned introduction, body and conclusion. *for the most part moves smoothly from one topic to another *PowerPoint effective in most areas: use of graphics, sounds effects, color, font, etc. *could be more professional and prepared	*includes a weak introduction, body and/or conclusion. *transitions from one topic to another are jumpy and random *PowerPoint not effective: poor use of graphics, sounds effects, color, font, etc. *not professional or prepared
EXPERIMENT ACTIVITY VISUAL _____ x 2 = _____	*completed experiment(s), demonstration(s), or prepared a visual that clearly, thoroughly, and accurately communicates most significant information in the presentation *enhances presentation *students gain a clearer understanding of the topic as a result of this *creative *reflects high level thinking and effort	*completed experiment(s), demonstration(s), or prepared a visual that communicates some of the information in the presentation *somewhat enhances presentation *students gain a clearer understanding of part of the topic as a result of this *somewhat creative *could make additions to project to increase level of thinking	*completed experiment(s), demonstration(s), or prepared a visual that does not communicate most significant information in the presentation *does not enhance presentation *students do not gain a clearer understanding of the topic as a result of this *low level thinking, simple
WORKS CONSULTED	*uses a minimum of 4 sources at least 2 books and 2 internet sites (or 1 expert) *correctly documented with no errors	*uses 3 sources *documented with minimal errors	*uses less than 3 sources *documented with many errors
NOTESHEET	*appropriate for topic/presentation *followed order of presentation *user friendly—easy to complete *thoroughly reflects main topics	*for the most part appropriate for topic/presentation *for the most part followed order of presentation *a little confusing to complete *reflects many of the main topics	*not appropriate for topic/presentation *did not follow order of presentation *difficult to complete *did not reflect main topics

TOTAL_____/100

QUESTIONS AND ANSWERS
ABOUT FOURTH CYCLE MSIP

1. Was there a curriculum document requirement for Third Cycle MSIP?

No. Curriculum documentation is a new requirement for Fourth Cycle MSIP.

2. Who is required to prepare a gifted curriculum document for Fourth Cycle MSIP?

Only state-funded gifted programs are required to develop a gifted curriculum document. All other gifted programs can do so at their own discretion.

3. How many units need to be included in my district's curriculum document?

Depending on individual circumstances and the current state of a district's written curriculum, individual districts can choose to document from one to several units at each grade level addressed by the program.

4. Is it necessary to document high school curriculum if our program offers resource services (versus gifted courses) at the high school level?

Most high schools offer Honors and AP classes. Unless your district offers these classes exclusively for identified gifted students, you do not need to provide documentation on them. It would be appropriate, however, to provide a description of gifted services offered at the high school level if they are part of your state-funded gifted program. That information can be included in the body of the document or in the appendix.

5. Can I develop my own curriculum template?

Yes. The template that is included is only a recommendation. There are many formats that a template can take. To make this point, we have included examples of different types of templates in Appendix 1. The key is to use a template and to include items that are expected by the state.

6. Does my gifted program template need to look like the ones my district uses for other subject areas?

No. The gifted program template does not need to be prepared in the same format as other subject area disciplines in your district. The gifted program document is designed to fulfill requirements of section 7.2 of the MSIP review process. Math, science and other curriculum areas are prepared to meet requirements under section 6.1 of the MSIP process. While there is not a penalty for doing so, the state department does not expect to see the same template used for different purposes.

7. What do I do about the emphasis being placed on the state's grade-level expectations?

Most often, gifted curriculum is linked to content area expectations that are one to three years above the grade level in which students are enrolled.

8. If units are already coded to National Standards, do I need to match the information to Missouri Standards also?

Yes. The linking of gifted curriculum to district and state standards helps to clarify the connection between your program goals and the goals of your district and the state.

9. Am I expected to write my gifted curriculum from scratch?

No. As you begin this process, you should work with the material you already have on hand. In addition, it is perfectly acceptable to use published curriculum material if it is high quality and geared to the abilities and interests of your gifted students. You will, however, need to include the same template information for these materials as you would if you wrote the curriculum yourself.

10. Do I need to include actual lessons in my gifted program document?

No. The Cycle IV document is an overview of your curriculum, not the curriculum itself. In some districts, gifted teachers have an entire 3-ring binder of material for each unit summarized in their district's gifted program curriculum document. Those detailed notebooks will not be reviewed by MSIP team members.

11. Do I need to have my gifted program curriculum document approved by my district's Board of Education?

Yes. You need to go through the process of district review and Board approval, much as other curriculum areas have their documents reviewed and approved.

12. Where can I go for more information about writing gifted curriculum?

This guide provides information about documenting gifted curriculum for Cycle IV MSIP. It is not intended to replace books that have been written on planning and preparing the curriculum itself. For help with that effort, please refer to page 33 where we have recommended a handful of high quality books on curriculum development.

13. Where do I send comments and suggestions for revisions to this guide?

Comments and suggestions related to this guide should be sent to:

Dr. Linda Smith, Gifted Coordinator
Rockwood School District
Center for Creative Learning
265 Old State Road
Ellisville, MO 63021

14. Where will updates to this gifted curriculum guide be published?

Any revisions made to this guide will be posted on the GAM website: www.gam.mo.org and the DESE gifted website: www.dese.state.mo.us/divimprove/gifted

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Winebrenner, Susan. (2001) Teaching Gifted Kids in the Regular Classroom. Minneapolis, MN: Free Spirit Publishing.

Recommended Books on Curriculum Development

Erickson, Lynn (1998) Concept-based Curriculum and Instruction: Teaching Beyond the Facts. Thousand Oaks, CA: Corwin Press.

Hayes-Jacobs, H. (1989) The Interdisciplinary Model: A Step-by-Step Approach for Developing Integrated Units of Study. In H. Hayes-Jacobs (Ed.), Interdisciplinary Curriculum: Design and Implementation. Alexandria, VA: Association for Supervision and Curriculum Development.

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DEFINITION OF TERMS

Acceleration – the process of moving a student through curriculum and/or grades at a more rapid rate than grade level peers

Alignment – how a curriculum connects across grade levels

Ascending Levels of Intellectual Demand – the process that escalates one or more facets of the curriculum in order to match a learner's profile and provide appropriate challenge and pacing.

Compacting – the instructional practice of assessing students' prior knowledge and skills and modifying and/or eliminating curriculum that would be repetitious or could be learned at an accelerated rate. Pre-assessments are an essential component of the compacting process.

Cluster grouping – refers to the top five to eight in a class or grade level being placed with a facilitator best qualified to teach gifted children

Curriculum – a set of organized experiences appropriate for learners that are written down and adopted for use in a school district (gifted curriculum would include learning experience specifically developed for gifted children)

Curriculum Mapping – a strategy for describing the relationships of major concepts in an interdisciplinary unit or between subjects or grade levels

Differentiated Instruction – a teacher's response to varying learner characteristics, such as students' readiness, interests, preferred styles and learning rate. Most commonly, the focus of differentiation efforts involves adjustments to content, process, products, and the learning environment.

Enrichment – involves offering topics, experiences and resources that go beyond the regular curriculum to provide greater challenge and opportunities for depth of learning

Formative Assessment – the initial and ongoing process of gathering and analyzing information regarding student learning. Formative assessment helps teachers modify and improve student learning during the time a unit or segment of curriculum is being taught. Examples include classroom questions, observations, and drafts of papers.

Integrated or Interdisciplinary Curriculum – curriculum that consciously applies methodology and language from more than one discipline to examine a central theme, issue, problem, topic, or experience.

Measurable Learner Objectives – objectives that describes expected learner outcomes in terms of observable learner behavior. It includes a clear statement of the most important content and skills to be learned and the learning level that will be assessed in the course or unit. Objectives should relate directly to the district's goals for graduates, should incorporate ideas from appropriate Missouri Show-Me Standards, and should be cross-referenced or aligned with those standards.

Performance Tasks/Projects/Assessments – assessments that are authentic and mirror issues and problems faced by adults; range in complexity from short-term tasks to long-term, multifaceted projects; generally allows students to personalize the task.

Prompts – open-ended questions or problems that require students to engage in critical thinking and prepare a response or product

Scope – refers to the comprehensiveness of a curriculum

Sequence – refers to the organization and ordering of curriculum experiences to maximize learning

Summative Assessment – the final evaluation of how successfully students achieved learning goals. Examples include such post-assessment tools as project presentations, end-of-unit self-assessments, and teacher-made examinations.

APPENDIX 1:
ALTERNATIVE TEMPLATES

This Appendix includes examples of alternative templates that have been developed by individual school districts. We have three purposes for including these templates in this Guide: (1) to demonstrate that there is more than one way to structure a template, (2) to give you ideas for creating your own template, and (3) to show that templates can include information judged to be important to individual programs but that is not required by the State.

In preparing your MSIP curriculum document, you can adopt, adapt or develop a template. Hopefully, whatever that template is, it will serve as a catalyst for improving existing curriculum and be a helpful tool in developing future curriculum material for gifted students.

GRADE ____ UNIT:
THEME:
STRAND:

Description:

Measurable Learner Objectives	Show-Me Standards	Show-Me Goals	Level of Bloom's Taxonomy	Instructional Strategies/Student Activities Resources	Assessments (including Performance-based)
The student will:					

GRADE 3 UNIT: ROMAN STUDIES
THEME: EXPLORATIONS
STRAND: RESEARCH SKILLS

Description: Roman culture, math government and law, architecture and engineering, art, religion and daily life are addressed in this unit. Hands-on activities and a research project in which students take on a role in ancient Roman society are included.

Measurable Learner Objectives	Show-Me Standards	Show-Me Goals	Level of Bloom's Taxonomy	Instructional Strategies/Student Activities Resources	Assessments (including Performance-based)
The student will:					
1. Analyze, discuss and evaluate informational material about ancient Roman civilization.	CA 1 CA 3 CA 4 M 5 S 8 SS 3 SS 6 FA 5	1.2 1.5 1.9 1.10 2.3 3.2 2.7 4.3	Analysis Evaluation	Small group discussion using analytical questions to gather information on different aspects of Roman life. Amery and Vanags, Rome and Romans Ancient Rome Independent Learning Unit Dal Maso, Rome of the Caesars Cleary, The Bullfinch Solution "Pompeii Destroyed/Revisited"-Video Morley and James, A Roman Villa	Venn diagram Constructed response
2. Research, analyze and produce lists of English words with Latin roots to expand vocabulary and comprehension of new words.	CA 3 CA 7	1.6 2.2 3.5	Knowledge Comprehension Analysis	1. Teacher models examples of Latin root words. 2. Students use a variety of advanced dictionaries, both book and computer, to research Latin root words.	Student glossaries of Latin words Class word wall

GRADE 3 UNIT: ROMAN STUDIES
THEME: EXPLORATIONS
STRAND: RESEARCH SKILLS

Description: Roman culture, math government and law, architecture and engineering, art, religion and daily life are addressed in this unit. Hands-on activities and a research project in which students take on a role in ancient Roman society are included.

Measurable Learner Objectives	Show-Me Standards	Show-Me Goals	Level of Bloom's Taxonomy	Instructional Strategies/Student Activities Resources	Assessments (including Performance-based)
The student will:					
3. Research a chosen role in Roman society by organizing information into an original product.	CA 3 CA 4 FA2 FA 5	1.1 1.4 1.5 1.7 1.8 2.1 2.4 2.5	Knowledge Comprehension Application Synthesis	1. Guided practice in reading for meaning and comprehension. 2. Guided practice in notetaking. 3. Students research a chosen role using a variety of resources. Internet resources, library and collection of Roman resource materials in classroom.	Calendar and checklist for steps in research/product development Content writing scoring guide
4. Develop a presentation for sharing research with a group.	CA 5 CA 6	2.2 2.4 2.7	Application Synthesis Evaluation	1. Guided practice outlining information for presentation purposes. 2. Guidelines and practice on good speechmaking techniques. 3. Written report, product and visuals to support presentation.	Scoring guide for presentation and project

Roman Studies Project
Scoring Guide

Student's Name_____ Role _____

Teacher's Name_____ Student Points_____ Teacher Points_____

	Advanced (4)	Proficient (3)	Nearing Proficiency (2)	Developing (1)
Information On Role	Detailed, elaborate information about daily life and job of a Roman role. At least 16 facts.	Some good detailed information on daily life and job. At least 12 facts.	Some description of daily life and job of Roman role. At least 8 facts.	Minimal details and information on life and job of Roman role. Fewer than 8 facts.
Outline	Carefully ordered and constructed outline. Easily followed. At least 16 facts.	Order of outline correct. Good structure. At least 12 facts.	Outline completed. Some structure difficulties. At least 8 facts.	Outline and facts are not easy to follow. Fewer than 8 facts.
Mechanics	Complete and complex sentences. Correct spelling and punctuation used throughout.	Complete simple sentences, correct spelling and punctuation used most of time.	Inconsistent use of complete sentences, correct spelling, and punctuation.	Many errors in use of complete sentences, spelling, and punctuation.
Project	Highly creative and related to role. Well constructed and neat. Perhaps multiple projects.	Project related to role, neatly done and creative.	Project not necessarily related to role. Quickly constructed.	Project not related to role. Project incomplete or not finished.

Student reflections_____

Teacher reflections_____

Curriculum Overview

Unit Title

Grade Level & Approximate Duration

Unit Information	
Rationale	
Measurable Learner Objectives	
Curriculum Areas (primary emphasis)	
Show-Me Standards (Knowledge & Performance)	
District Objectives (primary emphasis)	
Key Curriculum Components	
Real World Challenge	
Essential Questions	
Essential Content	
Essential Skills (prioritized by focus)	
Integral Affective Components	

Learning Activities	
Assessment(s)	
Potential Audience(s) for Student Work	
Resources	
Technology (equipment, websites, key software, etc.)	
Books/Articles	
Non-School Resources (mentors, agencies, field experiences, etc.)	
Other	

Rockwood Gifted Program Curriculum Overview

Feeding the World

Grade: Fourth
Duration: 45 Hours

Unit Information	
Rationale	This unit focuses on one of the most critical issues facing the world today: the need for an adequate supply of food for the world's growing population. Knowledge of agriculture and world farming systems is key to finding solutions to this enormous challenge. Farming systems enable us to organize nature in order to produce food for people. Around the world farming methods range from the very simple, using workers and traditional tools, to the most complex, using high tech machines, chemical fertilizers, pesticides, and genetic engineering. Differences in technology, soil types, climate, and culture unevenly affect the ratio of food per person. Worldwide, one person in every ten is permanently hungry. Every day at least 40,000 people die from hunger or hunger related diseases. More than enough food is produced each year to feed all the people in the world, but the food is in the wrong place. Add to that the rapidly growing world population, and the fact that only about 11% of the earth's surface is suitable for agriculture, and a problem of global proportions could develop. It is apparent that successful alternative farming and food distribution methods may need to be explored in order to continue to feed the world. In this unit students explore many interdependent agriculture issues and determine a possible solution to a real- world problem: How can we provide enough food to feed the world into the 21st century?
Measurable Learner Objectives	By the end of this unit students will be able to: • Gather, analyze and apply information and ideas about issues and challenges of food production in developing nations. • Communicate effectively in writing, verbally, and visually about the issues and challenges of feeding the world. • Recognize and solve problems to develop a plan to help provide enough food for people in developing nations. • Think critically about which possible solutions will have the greatest impact on world food production. • Work responsibly as an individual, a group member and a leader as they try to find a way to provide more food for the people in developing nations.
Curriculum Areas (primary emphasis)	• Social Studies • Science • Language Arts
Show-Me Standards **(Knowledge & Performance)**	Knowledge: Communication Arts 1, 4, 5, 6, 7 Social Studies 3, 4, 5, 6, 7 Math 1, 2, 3 Science 3, 4, 7, 8 Fine Arts 2 Health/Physical Education 1, 3 Performance: 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.8, 1.9, 1.10, 2.1, 2.2, 2.3, 2.7, 3.1, 3.2, 3.4, 3.5, 3.6, 3.7, 3.8, 4.1, 4.3, 4.4, 4.5, 4.6

Rockwood CCO's (primary emphasis)	• Geography, Grade 7, CCO I, CCO II, CCO III, CCO IV • Economics, Grades 9-12, CCO IV • Challenge Math, Grade 6, CCO IV • Contemporary Issues, Grades 9-12, CCO I, CCOII • Challenge Science, Grade 8, CCO I
Key Curriculum Components	
Real World Challenge	• How can we provide more food for people in developing nations?
Essential Questions	• What processes and systems provide the food on our dinner table? How do these systems work independently and together to produce food? • How can statistics be used to identify problems? How are statistics connected and/or related? Do statistics always give an accurate picture? • What is the impact of an international organization on a global community? What is the impact of one person on the global community? • What systems impact food production in developing nations? How can the systems be changed to improve food production? • How can we make a difference for developing nations?
Essential Content	Agriculture; developed and developing nations; statistical analysis; education, health care, income, transportation, and sanitation systems; United Nations and global community interactions.
Essential Skills (prioritized by focus)	Critical thinking, Problem Solving, Communication, Responsibility, Information Gathering
Integral Affective Components	• *To generate interest:* Assume the role of a farmer using SimFarm, use videos to realize what it might be like to live in the Third World, relate to world food distribution in the "Hunger Banquet," compare and contrast farming methods through a field trip to a farm, realize food production problems through experiments • *To provoke thought:* Participate in model United Nations meetings and resolutions, analyze food distribution in the Hunger Banquet, question mentors from developing nations, compare and contrast country statistics and system interactions • *To encourage caring:* Reflect on cultural stores, student written books, e-mail from Dr. M. M. in Malawi and M. R., school nurse, videos, and the Hunger Banquet • *To facilitate doing:* Consider stories of how we have helped in the past, be aware of what Dr. M. M. and Mrs. M. R. do, reflect on pictures of children we have helped, choices of how to help • *To promote generalization:* Recognize how the unit might have changed the student and how learning about this will have a long-term affect on their lives and the lives of others. Reflect on what is most important system for improving the way things are in the world? Realize how we will eat, play, think differently because of what we learned and did.
Learning Activities	Working as a group students will: • Participate in model United Nations meetings • Participate in a Hunger Banquet • Be involved in sanitation and diseases discussions In small groups students will: • Analyze statistics comparing developing nations • Conduct soil and plant experiments • Create a resource poster

	Individually students will: • Use SimFarm to compare first and third world farming • Develop a dossier of a developing country Working individually and in small groups students will: • Plan and carry out an action to help developing nations and explain how and why it will help
Assessment(s)	• Pre-assessment: Quiz • Performance Task: Dossier of a developing nation • Academic Prompt: Statistical analyses on developing nation data • Academic Prompt: Learning logs • Performance Task: Resource poster to teach others about a specific topic • Performance Task: Final project written/verbal/visual presentation • Post-assessment: Quiz
Potential Audience(s) for Student Work	• St. Louis Post Dispatch • Press Journal • Heifer Project • United Nations • IFPPRI
Resources	
Technology (equipment, websites, key software, etc.)	• SimFarm • Multiple CDs on country statistics, geography, developing nations, agriculture • Teacher created "Feeding the World Website"
Books/Articles	• Multiple books on individual developing nations: Visual Geography series, Cultures of the World series, Enchantment of the World series • Multiple books on agriculture: Food For The World by Su Swallow (1990), World Farming by Mortyn Bramwell, Food Resources by Robin Kerrod (1993) • Multiple books on the United Nations, Heifer Project: The United Nations Come Along With Me! by Nane Annan (2000), United Nations 50th Anniversary Book by Barbara Brenner (1995), World Ark Magazine by Heifer International • Multiple atlases: The State of the World Atlas by Dan Smith (1999), Scholastic Atlas of the World (2001) • Multiple story books about children living in developing countries: Somewhere In the World Right Now by Stacey Schuett (1995), The Spider Weaver by Margaret Musgrove and Julia Carns (2001), Song Bird by Tololwa M. Mollel (1999), Tales of Courage, Tales of Dreams by John Mundahl (1993)
Non-School Resources (mentors, agencies, field experiences, etc.)	• Mentors: Dr. M.M.: Project Peanut Butter, Dr. R.M.D.: IFPRRI • E-mail mentors: College professors, physicians, contractors and farmers
Other	• Field trip: Working farm

Note: Rockwood's template also includes reference to art, physical education and writing experiences.

Feeding the World
Final Project Plan

Name_____**Date**_____

As an ambassador to the United Nations, and as experts in agriculture and economics, you have been asked to help develop and carry out a possible solution idea which will provide enough food for all the world's people by the year 2020. The idea must include statistics that show why there is a need for more food, a step by step procedure, and your conclusions about how it will work. The idea and/or action will be submitted to the United Nations and a world food council, and shared at our final United Nations meeting on Dec. 15.

To begin developing your action or idea, start by doing the following:

_____ The question/problem I am trying to solve is: _____
_____

_____The (direct indirect) action I will take is: _____
_____

_____I will be working with: _____

To create your project, complete the following steps in order:

PLANNING your project:

_____Develop a list, diagram or web of your idea.
_____Write one or two sentences that explain your idea: *Our group will raise money by having a PJ Day. People wearing PJs will be asked to donate 50 cents to Project Peanut Butter and will be given a flyer to read to learn about Project Peanut Butter*.
_____Share your idea or action with your e-mail mentor to determine if it is realistic.
_____Determine what you will make (poster, brochure, website, book, etc)
_____Assign tasks to each group member. (put names on lines below)
_____List the materials you will need: _____
_____

CREATING your project, be sure it includes:

_____Title and Ambassador's (your) names. (_____)
_____3 Statistics in a paragraph that tells why there is a problem (_____)
_____A paragraph describing what your action or solution will be and where it will take place. (_____)
_____A paragraph about how you think your idea will help the world in the future.(____)
_____A web or diagram to show how your idea will interact with other systems (_____)
_____A page that lists all the sources you have used (Bibliography)

Present and evaluate your project:

_____Present the Project at the CCL Model United Nations Feed the World Symposium
_____Evaluate the Project

Feeding the World: Final Project Solution Scoring Guide

Name_____ **Date**_____

Learning	Accomplishing	Excelling	Exceptional
Information Processing			
I gathered information from my email mentor and from resource posters. I used related information to develop my project.	I gathered information from my email mentor, 1 or 2 resource posters and 2 other sources. I used accurate information I listed my sources.	I gathered information from my email mentor, 3 or more resource posters and 3 other sources. I used accurate information and explained my ideas so others could understand I listed my sources by author, title, page numbers, and date.	I gathered information from my email mentor, 5 or more resource posters and 4 other sources. I used accurate and complete information clearly explained high level ideas. I listed my sources using APA format.
Problem-Solving			
I identified a problem about why all people don't have enough food I determined a possible solution.	I identified a problem about why all people don't have enough food I determined several realistic solutions, and decided which one would work the best.	I explained several possible problems about why people don't have enough food. I analyzed several realistic solutions, determined which one would work best and explained how that solution would benefit the world.	I examined many possible problems about why people don't have enough food. I analyzed several realistic solutions, determined additional problems that might arise, and explained possible solutions to those problems.
Critical Thinking			
I used at least one fact or statistic to support my plan/action.	I used 3 facts or statistics to support my ideas. I explained how my plan/action could help feed the world.	I used at least 4 facts or statistics to support my ideas. I could logically explain how my plan/action would help feed the world and determined other systems that might be impacted.	I used many facts and statistics to support and explain my plan/action. My ideas and explanations were complex & demonstrated how all the systems would interact with each other and impact world food production.
Communication			
My poster or website or book, etc. was complete. I shared my ideas with others.	My poster or website or book, etc. was complete, and met the needs of my audience. I shared my ideas with others using good voice and eye contact.	My poster or website or book, etc. was complete, and met the needs of my audience. It included additional information about problems caused by world hunger. I shared my ideas with others using a quality product, good voice and eye contact.	My poster or website or book, etc. was complete, and met the needs of my audience. It included additional information about problems and possible solutions, and how both could impact by world hunger. I shared my ideas with others in a creative way using a quality product, good voice, eye contact, and a well organized presentation.
Responsibility			
I completed my part of the presentation. I listened to others.	I was a positive group member. I did my part to help develop a quality product. I sometimes listened to others' ideas and tried to change or adapt my ideas.	I was a positive and active group member. I helped my group develop a quality product and when needed I was a good leader. I listened to others' ideas and could change or adapt my ideas.	I was a positive, active, and enthusiastic group member. I took on a positive leadership role listening to all the group members and encouraging them to work together to develop a quality project. I helped the group look at everyone's ideas from multiple perspectives.

I am really proud of how I _____

Teacher comments:

APPENDIX 2:
ADDITIONAL RESOURCES FOR CURRICULUM DEVELOPMENT

CHARACTERISTICS OF EFFECTIVE CURRICULUM

(General Guidelines)

An effective curriculum:

MEANING

- Sets measurable objectives that focus on fundamental knowledge and processes
- Includes a clear, defensible rationale
- Contains explicit course (unit) descriptions
- Articulates the scope and sequence
- Provides assessments and instructional activities to measure established objectives

COHERENT

- Provides opportunities at each level to build on prior knowledge and processes

ARTICULATED

- Promotes learning at different grade levels that is appropriately sequenced and related
- Connects topics within grade levels/courses/units by unifying themes/concepts

HIGH STANDARDS FOR ALL

- Establishes a core set of challenging standards for all students
- Promotes in-depth learning
- Addresses student learning styles through a variety of instructional strategies
- Utilizes a variety of assessments to evaluate levels of student understanding

ALIGNED

- Exhibits strong connections between the written, taught, and the assessed curriculum
- Supports the process and content Show-Me Standards through appropriate objectives, instructional activities, instructional practices, and assessments

From: ASCD Curriculum Handbook (1998)

CHARACTERISTICS OF EFFECTIVE CURRICULUM

(Gifted Education Guidelines)

An effective curriculum should:

1. Focus on, and be organized to include, content which is more elaborate, complex, and in-depth, and includes problems and themes that integrate knowledge within and across systems of thought.

2. Allow for the development and application of productive thinking skills to enable students to reconceptualize existing knowledge and generate new knowledge.

3. Enable students to explore constantly changing knowledge and information and develop the attitude that knowledge is worth pursuing in an open world.

4. Encourage exposure to, selection of, and use of specialized and appropriate resources.

5. Promote self-initiated and self-directed learning and growth.

6. Provide for the development of self-understanding and the understanding of one's relationships to persons, societal institutions, nature, and culture.

7. Be conducted in accordance with prior stated principles, stressing higher-level thinking skills, creativity, and excellence in performance and projects.

From: Feldhusen, VanTassel-Baska, Seeley (1989) Excellence in Teaching the Gifted.

DIFFERENTIATION OF CURRICULUM AND INSTRUCTION
POSITION STATEMENT

The National Association for Gifted Children (NAGC) periodically issues policy statements dealing with issues, policies, and practices that have an impact on the education of gifted and talented students. Policy statements represent the official convictions of the organization.

All policy statements approved by the NAGC Board of Directors are consistent with the organization's belief that education in a democracy must respect the uniqueness of all individuals, the broad range of cultural diversity present in our society , and the similarities and differences in learning characteristics that can be found within any group of students. NAGC is fully committed to national goals that advocate both excellence and equity for all students, and we believe that the best way to achieve these goals is through *differentiated* educational opportunities, resources, and encouragement for all students.

NAGC supports the provision of appropriate quality educational experiences for all students across the spectrum of ability, background, and achievement. The learning needs of gifted students often differ from those of other students and should be addressed through differentiation, a modification of curriculum and instruction based on the assessed achievement and interests of individual students.

To provide appropriate and challenging educational experiences for gifted students, differentiation may include:

- acceleration of instruction;
- in-depth study;
- a high degree of complexity;
- advanced content; and/or
- variety in content and form.

Problems occur when teachers attempt to meet the needs of gifted students by limiting learning experiences to:

- offering more of the same level of material or the same kind of problem;
- providing either enrichment or acceleration alone;
- focusing only on cognitive growth in isolation from affective, physical, or intuitive growth;
- teaching higher thinking skills (e.g. research or criticism) in isolation from academic content;
- presenting additional work that is just different from the core curriculum; and/or
- grouping with intellectual peers without differentiating content and instruction.

Differentiation for gifted students consists of carefully planned, coordinated learning experiences that extend beyond the core curriculum to meet the specific learning needs evidenced by the student. It combines the curricular strategies of enrichment and acceleration and provides flexibility and diversity. Appropriate differentiation allows for increasing levels of advanced, abstract, and complex curriculum that are substantive and that respond to the learner's needs. NAGC believes that the use of such differentiation is essential to maximize the educational experience for gifted and talented students. NAGC further believes that appropriate educational experiences for these students are more effective when differentiated materials and activities are planned in advance and easily accessible.

The Parallel Curriculum
Ascending Levels of Intellectual Demand

- Vary the depth
- Adjust the abstraction
- Change the complexity
- Make contexts /examples more or less novel or familiar
- Adjust the pace
- Use more/less advanced materials and text
- Provide more/less scaffolding
- Provide frequent/intermittent feedback
- Provide/let students infer related strategies
- Infer concepts from applications and problem-solving
- Provide more/fewer examples
- Be more/less explicit/inductive
- Provide simpler/more complex problems and applications
- Vary the sophistication level
- Provide lengthier/briefer texts
- Prove more/less text support
- Require more/less independence or collaboration
- Require more/less evidence
- Ask for/provide analogies
- Teach to concepts before/after examples
- Teach principles before/after examples or concepts

From: The Parallel Curriculum (2003) NAGC.

ALTERNATIVE INSTRUCTIONAL STRATEGIES

- Whole-Group Instruction Discussion /Lecture
- Small-Group or Skill-Group Instruction Flexible Grouping
- Cooperative Learning
- Peer Coaching/ Tutoring or Cross-Age Tutoring
- Hands-On Activities, Projects, Activity Stations, Experiments
- Research or Information-Seeking (Inductive) Strategies
- Technology/ Computer-Assisted Learning
- Supplemental Instruction In or Out of the Classroom
- Other (eg., Field Trips, Debates, Socratic Inquiry, Mentorships, Simulations)

From: Third-Cycle Report Writing Form (July 2003) DESE

TYPES OF ASSESSMENTS

- Complex Performance Tasks with Specific Scoring Guides
  - Projects
  - Speeches
  - Essays
  - Concept Maps
  - Experiments
  - Other
- Peer Evaluation or Teacher Evaluations with Written Guidelines
- Quizzes or Written Tests from Texts
- Teacher-Made Quizzes or Unit Tests
- Teacher Observations
- Other

From: Third-Cycle Report Writing Form (2003) DESE

Cognitive and Affective Processes

(These are just two of many possible listings of skills.)

I. Cognitive and Affective Thinking

- **A. Creative Thinking Skills**
- **B. Creative Problem-Solving and Decision-Making**
- **C. Critical and Logical Thinking**

II. Character Development and Affective Process Skills

- **A. Character Development**
- **B. Interpersonal Skills**
- **C. Intrapersonal Skills**

III. Learning How-to-Learn Skills

- **A. Listening, Observing, and Perceiving**
- **B. Reading, Notetaking, and Outlining**
- **C. Interviewing and Surveying**
- **D. Analyzing and Organizing Data**

IV. Using Advanced Research Skills and Reference Materials

- **A. Preparing for Research and Investigative Projects**
- **B. Library and Electronic Reference**
- **C. Finding and Using Community Resources**

V. Written, Oral and Visual Communication Skills

- **A. Written Communication Skills**
- **B. Oral Communication Skills**
- **C. Visual Communication Skills**

From: Renzulli, Joseph & Reis, Sally. The Schoolwide Enrichment Model (1997).

I. Information Processing

- **A. Gathering Information**
- **B. Organizing Information**
- **C. Analyzing Information**
- **D. Applying Information**

II. Problem-Solving

- **A. Recognizing a Problem**
- **B. Using Problem-Solving Strategies**
- **C. Developing a Solution**
- **D. Using Systems Thinking**

III. Critical Thinking

- **A. Reasoning**
- **B. Using Facts and Logic**
- **C. Explaining Relationships**

IV. Communication

- **A. Planning a Message**
- **B. Creating a Message**
- **C. Presenting a Message**

V. Responsibility

- **A. Working as an Individual**
- **B. Working as a Group Member**
- **C. Working as a Leader**

From: Rockwood Gifted Program, Rockwood School District

TAXONOMY OF THINKING

Category	Definition	Trigger Words	Products
Synthesis	Re-form individual parts to make a new whole.	Compose • Design • Invent • Create • Hypothesize • Construct • Forecast • Rearrange parts • Imagine	Lesson plan • Song • Poem • Story • Advertisement • Invention • Other creative products
Evaluation	Judge value of something vis-à-vis criteria. Support judgment.	Judge • Evaluate • Give opinion • Give viewpoint • Prioritize • Recommend • Critique	Decision • Rating/Grades • Editorial • Debate • Critique • Defense • Verdict • Judgment
Analysis	Understand how parts relate to a whole. Understand structure and motive. Note fallacies.	Investigate • Classify • Categorize • Compare • Contrast • Solve	Survey • Questionnaire • Plan • Solution to problem or mystery • Report • Prospectus
Application	Transfer knowledge learned in one situation to another.	Demonstrate • Use guides, maps, charts, etc. • Build • Cook	Recipe • Model • Artwork • Demonstration • Craft
Comprehension	Demonstrate basic understanding of concepts and curriculum. Translate into other words.	Restate in own words • Give examples • Explain • Summarize • Translate • Show symbols • Edit	Drawing • Diagram • Response to question • Revision • Translation
Knowledge	Ability to remember something previously learned.	Tell • Recite • List • Memorize • Remember • Define • Locate	Workbook pages • Quiz or test • Skill work • Vocabulary • Facts in isolation

★ PRODUCT CHOICES CHART ★

Auditory	Visual	Tactile-Kinesthetic
Audio recording	Advertisement	Acting things out
Autobiography	Art gallery	Activity plan for trip
Book	Brochure	Animated movie
Classifying	Coat of arms	Collection
Commentary	Collage	Composing music
Crossword puzzle	Coloring book	Dance
Debate or panel talk	Comic book or strip	Demonstration
Dialogue	Costume	Diorama
Documentary	Decoration	Dramatization
Editorial	Design	Exhibit
Essay	Diagram	Experiment
Experiment	Diorama	Field experience
Fact file	Drawing or painting	Flip book
Family tree	Filmstrip	Flip chart
Finding patterns	Flannel board	Game
Glossary	Flow chart	Game show
Interview	Graphic organizer	How-to book
Journal or diary	Greeting card	Invention
Learning Center task	Hidden pictures	Jigsaw puzzle
Letter to editor	HyperStudio or other multimedia presentation software	Learning center—hands-on tasks
Limerick or riddle	Illustrated manual	Manipulatives
Mystery	Illustrations	Mobile
Newspaper	Learning Center visuals	Model
Oral report	Magazine	Museum exhibit
Pattern and instructions	Map	Papier-mâché
Petition	Mural	Photograph
Position paper	Pamphlet with pictures or icons	Play or skit
Press conference	Photo album	Pop-up book
Reading	Photo essay	Project cube
Scavenger hunt	Picture dictionary	Puppet show
Simulation game	Political cartoon	Rap or rhyme
Song lyrics	Portfolio	Reader's Theater
Speech	Poster	Rhythmic pattern
Story or poem	Rebus story	Role-play
Survey	Scrapbook	Scale drawing
Teaching a lesson	Slide show	Sculpture
Trip itinerary	Transparency talk	Simulation game
Written report	Travelogue	Survey
	TV program	TV broadcast
	Video	
	Web site	

Rockwood School District
Center for Creative Learning

Scope and Sequence of Performance Skills (K-5)

Goal I: **Information processing**
To develop the ability to gather, organize, analyze, and apply information.

Objectives:

Gifted students will be able to:	By the end of Grade 1	By the end of Grade 3	By the end of Grade 5
Gather Information	• The student can identify and use data from books and other available sources. • The student is aware of protocols for gathering information.	• The student can identify and use data from books, Internet sites and other available sources such as charts or surveys. • The student can follow protocols when gathering information.	• The student can initiate data retrieval through the use of technological sources, charts, surveys or graphs, and other available, reliable, resources. • The student independently follows appropriate protocols for gathering information.
Organize Information	• The student can organize relevant information.	• The student can organize information from several sources.	• The student can organize information from several sources into relevant, useful forms.
Analyze Information	• The student can determine which information is useful.	• The student can determine which information is useful to develop an outcome.	• The student can provide explanations about the usefulness and validity of information.
Apply Information	• The student can use data to develop outcomes.	• The student can use the information to develop his/her own idea or create a presentation.	• The student can use multiple sources of information to develop his/her own idea or create a presentation.

Goal II: Problem-Solving
To develop the ability to sense a problem exists, define the problem, analyze problem and solution interactions, and determine and assess possible solutions.

Objectives:

Gifted students will be able to:	By the end of Grade 1	By the end of Grade 3	By the end of Grade 5
Recognize a Problem	• The student can recognize a problem with teacher questioning.	• The student can identify a problem and define the parts of the problem.	• The student can identify a problem, determine its parts, and recognize the smaller issues of the problem.
Use Problem Solving Strategies	• The student knows at least two different ways to solve a problem.	• The student can use an appropriate problem solving strategy when faced with a new problem.	• The student uses multiple problem solving strategies and knows when to use each one.
Develop a Solution	• The student can develop a creative solution to a problem.	• The student can develop a creative and realistic solution to a problem.	• The student determines two or more possible creative and realistic solutions to a problem. The student knows how to choose the best solution and can explain his/her reasoning.
Use Systems Thinking	• The student can explain how two or more ideas interact.	• The student can explain the process of systems thinking, and can explain why it is important to look at the interactions.	• The student can determine how an idea or solution interacts with many other systems and can clearly explain the interactions and their impact on one another.

Goal III: Critical Thinking
To develop the ability to use critical/reflective thinking focused on deciding what to do or believe. This includes supporting ideas with facts and/or logic and explaining relationships.

Objectives:

Gifted students will be able to:	By the end of Grade 1	By the end of Grade 3	By the end of Grade 5
Use Facts	• The student can distinguish between statements that can be proven and statements that reflect personal beliefs or judgments.	• The student can use facts to elaborate on and/or support ideas.	• The student can find appropriate factual ideas and use statistical data to support and defend ideas.
Reason Logically	• The student can determine an answer based on a fact and draw a logical conclusion.	• The student can use steps to answer or formulate ideas. • The student can distinguish relevant from irrelevant information.	• The student can identify and explain ideas and/or answers using sequential and logical categories. • Students can choose relevant information to support original ideas.
Explain Relationships	• The student has the ability to see and extract the most powerful reasons, or results for a given event or action. • The student can reflect on his/her outcomes.	• The student can use information to explain a cause/effect relationship and/or action consequence relationship. • The student can use reflection to support and/or change ideas.	• The student can identify patterns to develop new ideas by determining several possible cause/effect relationships, and/or action/consequence relationships. • The student independently reflects on work to improve or change ideas.

Goal IV: Communication
To develop the ability to plan, create, and present verbal, visual, and written information in order to share thoughts and ideas with others.

Objectives:

Gifted students will be able to:	By the end of Grade 1	By the end of Grade 3	By the end of Grade 5
Plan a Message	• The student can follow a teacher-directed plan.	• The student can create, review, and revise a plan to develop an outcome.	• The student can initiate the development of a plan for his/her self selected projects and activities. He/she can work from the plan.
Create a Message	• The student can develop a verbal or visual presentation.	• The student can develop a written, verbal, or visual message/ presentation.	• The student can independently determine a format to develop quality written, verbal, and/or visual messages or presentations. • The student can create a presentation on a topic, theme, or issue using authoring software.
Present a Message	• The student can share ideas verbally using good eye contact, appropriate body language and strong voice. He/She can develop a visual message that explains the topic.	• The student can share ideas in writing (using organized, complete sentences that are error free), verbally (using eye contact, appropriate body language, good voice) or visually, (using appropriate visuals). • The student can use technology to enhance the presentation.	• The student develops paragraphs that clearly explain ideas; uses many good verbal presentation skills; and develops quality visuals that clearly explain ideas. The student plans the presentation for an audience. • The student uses technology to impact the audience's understanding of the topic.

Goal V: Responsibility
To develop the ability to work productively and independently as an individual, to be an active, positive and productive group member, and to demonstrate positive leadership skills.

Objectives:

Gifted students will be able to:	By the end of Grade 1	By the end of Grade 3	By the end of Grade 5
Work as an Individual	• The student can remain focused to complete an outcome. • The student realizes that actions can have consequences.	• The student can gather and organize learning materials while remaining focused on developing outcomes. • To deal with consequences, the student can develop a sense of control over his/her behavior.	• The student works independently to complete a task. He/She asks appropriate questions that help him/her develop quality outcomes. • The student is beginning to accept responsibilities for his/her actions.
Work as a Group Member	• The student can work cooperatively with a group to complete his/her part of the group's work.	• The student can listen to others and respect their ideas. The student helps the group reach an outcome.	• The student actively listens to others, acknowledges their ideas, helps plan a compromise, and makes positive contributions to help the group achieve an outcome.
Work as a Leader	• The student can share his/her ideas in a way that others will listen.	• The student demonstrates some positive leadership skills in a group.	• After listening to, and considering the relevancy of, others' ideas, the student recommends an action the group could take. The student shares the needed action in a positive way and encourages others to successfully accomplish the group goal.

South Carolina Consortium for Gifted Education

(Example from Scope and Sequence Guide)

Goal: To develop independent learning skills. Gifted and talented student will develop independent research skills.

Objectives:

Students will be able to	By the end of grade 3	By the end of grade 6	By the end of grade 8	By the end of grade 12
Identify a topic, problem, or issue and formulate questions for research.	• Identify a concrete topic for research. • Focus a concrete topic by brainstorming research questions or developing a KWL* board.	• Identify a topic for research and formulate significant complex questions for study. • Identify a messy situation and formulate a problem for investigation; identify areas of the problem to be researched.	• Define a topic, problem, or issue in an area of personal interest and develop substantive focus questions.	• Define a topic, problem, or issue for study; develop an approach or thesis; and formulate questions as a guide for research.
Select and apply a research methodology appropriate for the topic, problem, or issue.	• Apply simple techniques of documentary research. • Conduct simple experiments with teacher direction. • Design interview questions and carry out a simple interview.	• Apply documentary, interview, observation, and survey techniques to research appropriate topics and problems. • Construct hypotheses and design simple experiments to test them. • Carry out a computer data search on an appropriate topic or problem.	• Apply case study and comparative study techniques to research an appropriate topic or problem. • Given a topic, problem, or issue, select and apply an appropriate methodology.	• Apply simple correlational study techniques to research an appropriate topic, problem, or issue. • Design and implement a research plan appropriate for the selected topic, problem, or issue.
Access information from a variety of primary and secondary sources through print, electronic, and other media.	• Locate secondary sources relevant to the topic (e.g., encyclopedias, videos and other media, books). • Take simple, accurate notes to gather information relevant to the topic and focus questions. • Record sources used (author, title, medium).	• Distinguish between primary and secondary sources on a given topic or problem. • Locate relevant primary and secondary sources. • Take accurate notes from sources, using direct quotations, paraphrasing, and summarizing. • Record sources of all information noted, including complete bibliographic information.	• Locate relevant primary and secondary sources representing print, electronic, and other media. • Select and apply note-taking techniques appropriate for the type of information collected. • Record complete bibliographic data and cite the sources of all information noted.	• In researching any topic, problem, or issue, locate relevant and varied resources, apply appropriate note-taking techniques, and record complete information necessary for documentation.
Assess the validity, reliability, and relevance of information collected from different sources.	• Note the publication dates of sources and identify differences in information. • Identify the qualifications of an author or interview subject.	• Compare and contrast sources on a topic, issue, or problem with respect to date, aspects covered, information provided, and relevance to the study. • Compare and contrast authors and interview subjects with respect to qualifications. • Analyze an experiment for factors affecting the validity and reliability of the results.	• With teacher guidance, examine sources in terms of factors that would influence their reliability and validity. • Construct a simple annotated bibliography which assesses the relevance of the sources and the qualifications of the authors/interview subjects.	• Select relevant, reliable, and valid resources. • Construct an annotated bibliography which assesses the relevance, reliability, and validity of sources on a topic, problem, or issue.

Objectives (Continued):

Students will be able to	By the end of grade 3	By the end of grade 6	By the end of grade 8	By the end of grade 12
Organize and analyze data.	• Classify information by subtopic. • Complete a data chart to organize information from research.	• Organize information/ data in the following ways: • --chronological order • --sequence of steps • --generalization/ • evidence pattern • --comparison/contrast • --subtopic • --data table • --graph • Construct a concept map or web for the topic, problem, or issue.	• Organize information/data to show cause/effect relationships. • Select an appropriate organizational pattern for a given set of information. • Map, web, or outline a topic, issue, or problem. • Select an appropriate type of graph for a set of numerical data and construct the graph properly without bias or distortion.	• Select appropriate methods of organization for sets of information gathered on a topic, problem, or issue and implement them effectively and accurately.
Synthesize and interpret data. **Develop conclusions and implications in the light of the problem**.	• Make inferences from data collected and organized in a research study. • Draw conclusions about the meaning of the results of an experiment.	• Make inferences about the data with respect to trends, future directions, similarities, and differences. • Draw conclusions and develop generalizations based on and supported by data gathered in the course of research.	• Synthesize data, draw conclusions, and present findings in appropriate communication forms. • Analyze implications of data gathered and patterns identified in the course research.	• Synthesize data, draw conclusions, analyze implications, and present findings in an appropriate communication form.
Plan, pace, implement, evaluate an independent project.	• Follow a teacher-directed plan for an independent project. • Pace the work so that it is completed by the due date. • Complete a simple self-evaluation.	• Given an independent study assignment and steps to be completed, develop a plan for completing the assignment on schedule. • Implement the plan and evaluate the results. • Based upon the evaluation, set goals for the next independent study.	• Given an independent study assignment, identify steps to be completed, develop a plan to complete it on schedule, implement the plan, monitor progress, and amend the plan as needed to complete the assignment by the date due. • Evaluate the effectiveness of the plan and its implementation and make recommendations for future growth.	• Plan, pace, implement, and evaluate an independent project.

Objectives (Continued):

Students will be able to	By the end of grade 3	By the end of grade 6	By the end of grade 8	By the end of grade 12
Select an appropriate medium to communicate the results of research.	• Write a simple report without copying from sources. • Present a simple oral report. • Construct a bar graph, picture graph, or rectangular area graph both with and without technological assistance. • Use computer software to construct a circle graph. • Use technology to enhance their presentation of research.	• Construct a timeline to scale. • Construct a special purpose map. • Construct a bar, picture, line, and rectangular or circular area graph both with and without technological assistance; use the appropriate type graph for the data set. • Write a documented composition which reports the results of research.	• Examine a set of data or research findings and identify appropriate ways to communicate the data or findings. • Effectively implement the communication strategy selected.	• For any research study, select and implement an appropriate strategy of communication for the content and intended audience.
Demonstrate effective allocation of time and resources.	• Follow a teacher-directed plan or contract.	• Assess their own style of working and design an teacher-approved work plan.	• Develop a self-management plan and implement it. • Evaluate the implementation of the plan and determine any need for improvement.	• Demonstrate effective allocation of time and resources in all independent assignments.

SCOPE AND SEQUENCE FOR PATTONVILLE GIFTED PROGRAM K-12

Grade	Communications (Oral/Written)	Research Skills	Problem Solving	Affective/Leadership
K	KONNECT (kindergarten Outreach Network Nurturing and Extending Children's Talents) – Whole group using problem solving and thinking skills during 1st Semester and small group creative and productive thinking skills during 2nd Semester.			
1ST AND 2ND GRADE THEME: SIMILARITIES AND DIFFERENCES				
1	Reader's Theatre (CA) Leadership (CA)	Rivers (SC) Australia (SS)	Puzzling Pieces (M)	Affective education is an integral part of the ALPHA program. Students are part of a small homeroom group for beginning and end of the day activities. In addition, instruction in leadership skills as well as opportunities for leadership is provided throughout the program.
2	Writing Patterns (CA)	Microscopic Investigations (SC) Oceanography (SC) Mammals and Birds Australia Study (SS)	Through the Looking Glass (M)	
3RD GRADE THEME: EXPLORATIONS				
3	Jr. Great Books (CA)	Roman Studies (SS) Oceanography (SC) Archaeology (SS) Exciting Explorations Chemistry Concepts (SC, M)	Design Construction (SC) Basic Engineering (SC, M) Identified Flying Objects (SC) Bubbleology (M,SC)	
4TH GRADE THEME: MYSTERIES				
4	LinguiSHTIK (CA) Storytelling (CA) Who Dun It? (CA)	Mysteries of the Deep (SC) Then and Now (SS) Art of the West (SS)	Math Mysteries (M) Building a Business (SS) Money and Banking (SS) Odyssey of the Mind (SC)	Psychology and You (SC, CA)
5TH GRADE THEME: AWAKENINGS				
5	Choose Your Own Adventure (CA) Play Writing and Drama (CA)	Opera Libretto and Set Design (CA) Oceanography (SC) World Tour (SS)	Bridges (SC, M) Photo Imaging (CA, M) Kitchen Chemistry (SC, M) World of Finance (M) Fantasy Baseball (M)	

Note: Pattonville's charts have been modified from landscape layout to portrait layout
CA=Communication Arts, M=Math, SC=Science, SS=Social Studies

SCOPE AND SEQUENCE FOR PATTONVILLE GIFTED PROGRAM K-12

Grade	Communications (Oral/Written)	Research Skills	Problem Solving	Affective/Leadership
6	Literature Unit: (CA) Reading/Discussion/Writings Selections from: Jr. Great Books The Hobbit And Then There Were None Roll of Thunder, Hear My Cry	The Brain (SC)	Inventions (SC) Statistics-Surveys and Interpreting Data (MA)	Affective and Leadership Skills are an integral part of all units for all grades.
7	Literature Unit: (CA) Reading/Discussion/Writings Selections from: Jr. Great Books Fahrenheit 451 The Giver Lincoln-Douglas Debate	Gifted Person (CA, SS) The Space Race (CA, SC)	Architecture (SC,SS) CECH-Local Government Issues (SS, SC)	
8	Literature Unit: (CA) Reading/Discussion/Writings Selections from: Jr. Great Books Ender's Game Illustrated Man Lincoln-Douglas Debate (CA)	Model United Nations (SS)	Genetics (SC) Astrophysics (SC)	

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<table>
<tr><th>Grade</th><th>Communications (Oral/Written)</th><th>Research Skills</th><th>Problem Solving</th><th>Affective/Leadership</th></tr>
<tr><td>9</td><td>Thematically organized reading, writing, speech activities
Examples of literature:
<u>To Kill a Mockingbird</u>
<u>The Chosen</u>
<u>Raisin in the Sun</u>
<u>Lord of the Flies</u>
<u>A Separate Peace</u></td><td colspan="2">FUTURE PROBLEM SOLVING PROCESS BASED ON RESEARCH OF SPECIFIC REAL WORLD ISSUES</td><td rowspan="3">Affective and Leadership Skills are addressed through literature studies, problem solving activities, and community service projects carried out by students at all grade levels.</td></tr>
<tr><td>10</td><td>Thematically organized reading, writing, speech activities
Examples of literature:
<u>Death of a Salesman</u>
<u>The Crucible</u>
<u>Our Town</u>
<u>Of Mice and Men</u>
<u>Tale of Two Cities</u></td><td colspan="2">FUTURE PROBLEM SOLVING PROCESS BASED ON RESEARCH OF SPECIFIC REAL WORLD ISSUES

Writing an historical fiction story based on research</td></tr>
<tr><td>11</td><td>Thematically organized reading, writing, speech activities
Examples of literature:
<u>Grapes of Wrath</u>
<u>Brave New World</u>
<u>A View from the Bridge</u>
<u>The Scarlet Letter</u></td><td colspan="2">FUTURE PROBLEM SOLVING PROCESS BASED ON RESEARCH OF SPECIFIC REAL WORLD ISSUES

Research paper based on a real world issue</td></tr>
<tr><td>12</td><td>AP/College Credit:
English
Drama
Debate and Public Speaking</td><td colspan="2"></td><td></td></tr>
</table>

AFFECTIVE NEEDS OF GIFTED STUDENTS
SCOPE AND SEQUENCE

Addressing the affective needs of gifted students is an integral and vital part of the Pattonville Gifted Program at all levels. A variety of topics and issues that are appropriate to the needs of gifted students are addressed through small group discussions as well as in meetings with individual students.

KEY: I = Introduce, instruct R = Review, reinforce E = Expand, elaborate

Needs	**K**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Provide orientation to gifted programming. Including information about the selection process and the social, emotional, and academic implications of giftedness.				I	I	I	I	R	R	E	E	E
Enhance relationships with others, including both those who are identified as gifted and those who are not.		I	I	I	I	R	R	R	R	E	E	E
Assist with long-term life planning, including opportunities to deal with issues related to multi-potentiality.		I	I	I	I	I	R	R	R	E	E	E
Provide experiences that address the increased incidence of perfectionism, unrealistic goals, emotional intensity, moral concerns, and the resultant stress and lower achievement in the gifted program.	I	I	I	I	I	R	R	E	E	E	E	E

RESEARCH SCOPE AND SEQUENCE

Research is an integral part of both independent and group projects within the Gifted Program. While it is expected that research skills are part of the regular curriculum, their use within the Gifted Program is usually accelerated and advanced because of the nature of student interests and final products.

KEY: I = Introduce, instruct R = Review, reinforce E = Expand, elaborate

TOPICS	**K**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Formulating and writing questions using Bloom's	I	I	I	I	I	I	R	R	R	E	E	E
Defining Topic	I	I	I	I	I	R	E	E	E	E	E	E
Using Key Words	I	I	I	I	I	R	E	E	E	E	E	E
Using technology to research topic	I	I	I	I	I	E	R	R	R	E	E	E
Evaluating sources of information print visual, electronic		I	I	I	I	R	R	R	R	E	E	E
Note taking on fact cards		I	I	I	I	I	R	R	R	E	E	E
Avoiding plagiarism; using original expression	I	I	I	I	I	R	E	E	E	E	E	E
Outlining		I	I	I	I	R	E	E	E	E	E	E
Interviewing	I	I	I	I	I	I	R	R	R	E	E	E
Surveying using Data	I	I	I	I	I	I	R	R	R	E	E	E
Synthesizing Ideas	I	I	I	I	I	R	R	R	R	E	E	E
Writing reports/position paper/research paper	I	I	I	I	I	R	R	R	R	E	E	E
Documenting sources (using MLA style)		I	I	R	R	E	E	E	E	E	E	E
Presenting research orally and in writing	I	I	I	I	I	R	E	E	E	E	E	E